DOCUMENT RESUME

ED 109 674 CS 202 151

AUTHOR Kuchenbecker, Shari Young
TITLE Comparison of Form Class Usage in Children's Speech and the Mod 2 Kindergarten Storybooks.
INSTITUTION Southwest Regional Laboratory for Educational Research and Development, Los Alamitos, Calif.
SPONS AGENCY Office of Education (DHEW), Washington, D.C.
REPORT NO SWRL-TN-2-72-23
PUB DATE Jun 72
NOTE 65p.

EDRS PRICE MF-$0.76 HC-$3.32 PLUS POSTAGE
DESCRIPTORS *Beginning Reading; *Child Language; *Content Analysis; Instructional Materials; Primary Education; *Reading Comprehension; Reading Materials; *Reading Research; Reading Skills
IDENTIFIERS *Model 2 Reading Program

ABSTRACT

Recent research supports the view that the beginning reader's comprehension is aided by a similarity between written materials and the child's own oral language production. The content of the Southwest Regional Laboratory (SWRL) Mod 2 Kindergarten Storybooks was analyzed by surface linguistic form class and compared to an analysis of 5.5- to 6.5-year-old children's speech production. Distributions of the frequency and variety of the use of the form classes are presented. Similarities and differences between the Mod 2 storybooks and oral production distributions are examined to identify areas in which effects on comprehension might be profitably investigated. The results indicated that four areas of form class usage present questions for investigation relevant to the design of Mod 3 reading materials. Those areas are the use of nouns, the use of the future and the unmarked present tense in preference to the progressive and the perfect tense, the use of adjectives, and the use of a word in more than one form class or with more than one conceptual meaning in the text. (The results of this study are presented in both narrative and table form.) (Author/RB)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

ED109674

SOUTHWEST REGIONAL LABORATORY TECHNICAL NOTE

DATE: June 6, 1972

NO: TN-2-72-23

SCOPE OF INTEREST NOTICE
The ERIC Facility has assigned this document for processing to: CS PS
In our judgement, this document is also of interest to the clearinghouses noted to the right. Indexing should reflect their special points of view.

COMPARISON OF FORM CLASS USAGE IN CHILDREN'S SPEECH AND THE MOD 2 KINDERGARTEN STORYBOOKS

Shari Young Kuchenbecker

ABSTRACT

Recent research supports the view that the beginning reader's comprehension is aided by a similarity between written materials and the child's own oral language production. The content of the SWRL Mod 2 Kindergarten Storybooks (Mod 2 Kg) was analyzed by surface linguistic form class and compared to an analysis of 5 1/2 - 6 1/2 year-old children's speech production. Distributions of the frequency and variety of use of the form classes are presented. Similarities and differences between the Mod 2 Kg storybooks and oral production distributions are examined to identify areas in which effects on comprehension might be profitably investigated. Four areas of form class usage present questions for investigation relevant to the design of Mod 3 reading materials. They are: 1) use of nouns (proper names and pronouns versus other types of nouns), 2) use of the future and the unmarked present tense in preference to the progressive and the perfect tense, 3) use of adjectives, and 4) use of a word in more than one form class or with more than one conceptual meaning in the text.

CS 202 151

This document is intended for internal staff distribution and use. Permission to reprint or quote from this working document, wholly or in part, should be obtained from SWRL, 4665 Lampson Ave., Los Alamitos, CA.

LISTING OF TABLES

		Page
Table 1	Relative Frequency of Parts of Speech Used by Children	5
Table 2	Content and Function Words in Children's Speech and the Mod 2 Kg	6
Table 3	Relative Variety in Parts of Speech Used by Children	8
Table 4	Mean Number of Proper Names in Children's Speech	11
Table 5	Percentage Distribution of Different Types of Name Words Used by Children	11
Table 6	Percentage Regular, Irregular, and Auxiliary Verb Usage in Children's Speech and Mod 2 Kg Text	14
Table 7	Percentage of Different Regular, Irregular and Auxiliary Verbs Used in Children's Speech and Mod 2 Kg	15
Table 8	Auxiliary Verbs in Children's Speech and Mod 2 Kg Text	17
Table 9	Prepositions in Children's Speech and Mod 2 Kg Text	23
Table 10	Personal Pronouns in Children's Speech and Mod 2 Kg Text	25
Table 11	Conjunctions in Children's Speech and Mod 2 Kg Text	26
Table 12	Existential Dummy Usage in Mod 2 Kg Text	27
Table 13	Usage of the Word Still in Mod 2 Kg Text	29
Table 14	Interrogator Usage in Children's Speech	31
Table 15	Words Used in More Than One Form Class in the Mod 2 Kg Text	34
Appendix A	Analysis of the Mod 2 Kg Storybooks for Word Frequency Counts of Surface Linguistic Form Classes	40
Appendix B	Words in the Mod 2 Kg Storybooks as Rated by Rinsland's *A Basic Vocabulary of Elementary School Children*	53

COMPARISON OF FORM CLASS USAGE IN CHILDREN'S SPEECH AND THE MOD 2 KINDERGARTEN READING PROGRAM

Shari Young Kuchenbecker

The design of Mod 2 reading considered spelling-to-sound correspondences, as well as lexical, syntactical, and conceptual constraints. These topics have been addressed by Berdiansky, Stanton, and Cronnell (1971), Hatch (1969, 1970), Jenkins (1972), Jenkins and Krashen (1972), and Bessemer (1972).

When a reading program is designed primarily on the basis of phonetic regularities in spelling-sound correspondences (Berdiansky, Stanton, and Cronnell, 1971), it is necessarily the case that the lexicon will be selected to reflect the more regular and productive rules. Such selection places unspecified but inevitable limitations on both the usage of words in various linguistic form classes representing the primary syntactical functions, as well as the syntactical patterns and transformations which are available. It is clearly desirable to identify the nature of the limitations imposed and furthemore, to examine through empirical research and program evaluation procedures, the consequences of such constraints on effective comprehension of the reading materials.

It is the purpose of this paper to present pertinent descriptive data on the syntactic functions of the lexicon in the thirty-seven stories of the SWRL Mod 2 Kindergarten Storybooks (Mod 2 Kg). It is intended to aid in identifying possible areas in comprehension so as to guide empirical investigations relevant to the design of Mod 3 reading materials. Tables have been compiled which evaluate each

story for specific word frequencies as functional members of given surface linguistic form classes (Appendix A). The twelve classes employed for analysis follow the suggested format of Jenkins (1972). They are: Nouns--common and proper, Verbs, Auxiliaries, Adjectives, Adverbs, Pronouns, Conjunctions, Prepositions, Qualifiers, Simple Includers, Sentence Linkers, Interrogators, and Coordinators. A final Miscellaneous category has been established to include words not clearly members of the preceding form classes. Total frequency counts were computed and percentages calculated.

There are numerous differences between speech and writing, (Loban, 1963; Smith, Goodman, & Meredith, 1970; and Harrell, 1957). Despite such differences, it can be argued on a linguistic basis that the beginning reader's comprehension of reading material should be facilitated when the written text has a high degree of correspondence to the reader's produced spoken language (Jenkins & Krashen, 1972). Empirical support for this proposition was obtained by Ruddell (1965), who found that even at the fourth-grade level, reading comprehension is improved by having substantial similarity between children's oral language patterns and the patterns of language used in the reading materials.

Given materials for the beginning reader written to correspond to the child's oral language production, the usage distributions of the written lexicon should also be found similiar to that appearing in oral usage. Marked deviations in such distributions are indicative of unusual language patterns, and suggest potential sources of comprehension difficulty. The validity of a presumption of difficulty is reinforced by

the recent findings of Carroll (1971), who showed that familiar words appearing in relatively unfamiliar syntactic roles led to comprehension difficulties, even among ninth-graders, and even when the words did not change meaning with their change in function. For example, children who had no difficulty with the word end used as a noun might not understand end used as a verb.

As a baseline for comparison, studies were sought which contained information on young children's speech compiled in a similar manner to the analyses performed on the Mod 2 Kg storybooks. Only two such studies were found between 1930 and 1972 which used the same methodology as was employed here. Careful scrutiny of the McCarthy (1930) and Davis (1937) studies was made to insure that the techniques employed met precise standards. McCarthy chose a population of children between 18-54 months selected to be a representative cross-section of the United States socio-economic classes. In home conversation, McCarthy recorded and analyzed 50 consecutive responses by the children according to sentence structure and parts of speech used. Davis repeated the same technique in a detailed study of the development of linguistic skills in twins, singletons with siblings and only children, from the ages of 5 to 10. In agreement with the analyses performed on the Mod 2 Kg stories, McCarthy and Davis conducted their studies with the assumption that there is a great deal of overlap between the parts of speech. It is impossible to classify many words as being used exclusively in one specific form class. To exemplify, in a five percent random sample analysis of the Thorndike (1932) *Teacher's Word Book*, it was found

that 43% of the first 10,000 most common words were grammatically ambiguous (Carroll, 1971). Further, this same study showed that more common words are more likely to have multiple potential grammatical functions. Of the first 1,000 most common words, 72% were grammatically ambiguous.

To overcome the problems in overlapping parts of speech and grammatical ambiguity of isolated words, both the children's language studies and the present analysis chose to obtain accuracy in their form class frequency counts by handling each word individually in light of its specific context. While a form class frequency count can be no more than a gross componential reflection of the language used, it yields some interesting statistics, and when related to syntactic information of a similar sort allows a fuller understanding of the relation between child language and the SWRL materials.

FORM CLASS USAGE

WORD FREQUENCY

Table 1 presents the data from the McCarthy language research with 4 1/2 year-old children, the Davis language research with 5 1/2 and 6 1/2 year-old children, and the Mod 2 Kg story analysis. The two oral language studies show a high degree of comparability indicating that the usage distributions are reliable. The major similarities and dissimilarities between the normative oral language data and the Mod 2 Kg stories are discussed below.

We first note from the data that the stories contain relatively more nouns and verbs coupled with relatively fewer modifiers when

TABLE 1

RELATIVE FREQUENCY OF PARTS OF SPEECH USED BY CHILDREN

Percentage Based on the Total Number of Vocabulary Words

Class	McCarthy	Davis		SWRL	
Nouns	4 1/2	5 1/2	6 1/2	Mod 2 Kg	
Nouns	19.3%	18.5%	18.4%	22.6% (9.0) (13.6)	Nouns Common Proper
Verbs	25.1	26.2	26.7	30.8 (7.3) (23.5)	Verbs Auxiliary Content
Modifiers	22.2 (15.2) (7.0)	22.0	20.0	16.0 (8.7) (7.3)	Modifiers Adjectives Adverbs
Pronouns	20.5	19.1	19.6	17.4	Pronouns
Conjunctions	3.8	2.4	3.4	1.9	Conjunctions
Prepositions	7.1	8.6	8.9	9.3	Prepositions
Interjection	1.2	2.0	1.4	0.0	Interjection
Miscellaneous	0.8	1.4	1.7	2.2	Miscellaneous
Total Number of Words	46,000	570,400	198,450	3,450	

McCarthy 1930, P. 114

Davis 1938, P. 310

compared to children's spoken language. A breakdown of the stories reveals that adjectives are particularly infrequent. Currently, the adjective form class is composed of articles and demonstratives with only about one-half percent of the total vocabulary coming from content adjectives.

Although there are slightly fewer pronouns in the stories, by and large, the frequencies in the remaining classes show quite a close agreement with those in the McCarthy and Davis data.

Based on the information in Table 1, Table 2 shows the total proportions of content words and function words in the oral and written materials. The function words include noun substitutes for the purposes of this comparison. Hatch (1969) has stated that the Mod 2 Kg stories contain a high proportion of substitute words and function words when compared to three other series of preprimer textbooks.

TABLE 2

CONTENT AND FUNCTION WORD IN CHILDREN'S SPEECH IN MOD 2 KG TEXT

Resource	Age	Percentage Content Words	Percentage Function Words
McCarthy	4 1/2 years	66.4%	33.4%
Davis	5 1/2 years	66.7%	33.5%
Davis	6 1/2 years	65.1%	35.0%
SWRL Text	FYCSP	68.6%	30.0%

McCarthy, 1930, P. 114
Davis, 1938, P. 310

Her observation regarding function words was motivated by the Venezky research (1968) which suggested that the higher the ratio of function words to content words, the more difficult the reading of the text becomes. From the information in Table 2, our analysis shows that with regard to oral data the stories do not have an unreasonably high ratio of function to content words. In fact, the ratio observed in the stories is surprisingly close to that found in the utterances of 4-6 year-old children.

WORD VARIETY

The total percentage frequency data is further explicated by information in Table 3, which gives the mean percentages of each part of speech based on the total number of different words used. It is notable that the two oral studies again show a high degree of comparability with similar trends in the data, however, there are some linear variations which indicate the older children in the Davis study have a greater variety of words in their vocabulary in some form classes than do the younger children. This is interpreted by Davis as evidence that the form class is growing relatively rapidly and acquiring new potential words in the usable pool. The increases with age in noun and verb categories are examples of this. Other form classes remain unchanged in the total percentage of different words used. The children seem to have acquired many of the commonly used prepositions and conjunctions, therefore there is no proportionate increase in these form class as their total vocabulary grows. The decrease in adjective-adverb variety with age is indicative that a

TABLE 3

RELATIVE VARIETY IN PARTS OF SPEECH USED BY CHILDREN

A Count Based on the Total Number of Different Vocabulary Words

Class	McCarthy	Davis		SWRL	
	4 1/2	5 1/2	6 1/2	Mod 2 Kg	
Nouns	38.8	44.5	42.9	27.8 (21.3) (6.5)	Nouns Common Proper
Verbs	25.5	26.4	28.8	36.6 (3.2) (33.4)	Verbs Auxiliary Content
Modifiers	20.8 (13.4) (7.4)	18.1	16.9	19.3 (6.4) (12.9)	Modifiers Adjectives Adverbs
Pronouns	5.7	2.6	3.5	6.5	Pronouns
Conjunctions	1.7	1.3	1.7	0.6	Conjunctions
Prepositions	3.2	2.6	3.2	6.5	Prepositions
Interjection	2.5	3.6	2.0	0.0	Interjection
Miscellaneous	1.8	0.8	0.8	3.7	Miscellaneous
Mean Number of Different Words Per Child	99.5 n = 20	93.9 n = 248	108.8 n = 63		

McCarthy 1930, P. 118

Davis 1938, P. 310

stable common stock of these words is used by children compared to an expanding total vocabulary. The pronoun data does not show any consistent results or trends, suggesting that the number of different pronouns used by children may be variable and situationally specific.

Comparing the language variety data with the written variety data, it is evident that while nouns are used more frequently in the Mod 2 Kg stories than in oral speech, there are proportionally fewer different nouns than normally observed in children's language. In contrast to this, verbs are both more frequent in the total vocabulary of the stories and have greater variety than is seen in children's speech.

The variety of adjectives and adverbs in both oral and written analysis is approximately the same. This would indicate that the stories have a representative number of different adjectives and adverbs, but do not utilize them as frequently as normal oral speech (compare Table 1 with Table 3).

In the remaining classes, the data in Table 3 indicates that there is a slightly greater variety of prepositions, and a lesser variety of conjunctions than is characteristic of children's language.

WORD FREQUENCY AND WORD VARIETY SUMMARY

To summarize the data presented in Tables 1-3, we may conclude that there is generally considerable agreement between form class usage in the Mod 2 Kg stories and children's speech. Although there are discrepancies in the noun-verb usage and modifier usage, the results at this level of analysis certainly do not indicate any

gross deviations when comparing the Mod 2 Kg stories to child language usage of lexical form classes.

USAGE OF SPECIFIC WORDS AND SUBCLASSES

Having completed a brief examination of form class interrelationships in oral language production and written Mod 2 Kg stories on the molar level, this section scrutinizes particular form classes more closely. Examined are: nouns--common and proper; verbs--auxiliary, regular, and irregular; pronouns; prepositions; conjunctions; and finally miscellaneous lexical considerations in the Mod 2 Kg stories. A review of the major findings of the analysis is made and suggestions for future Mod 3 consideration are proposed.

NOUNS

Referring back to Table 1, the noun form class was found to include 22.6% of the total vocabulary in the SWRL program. Specifically, 13.6% of the total vocabulary is in the category of proper names and 9.0% falls into the classification of common nouns.

Research on proper name usage by children is scattered and sparse. While there is usage variation with age and situation, however, the total percentage of the noun vocabulary contributed by proper names is never reported to exceed 3.5%. Additionally, as the data in Table 4 by Davis shows, there is a decrease in both total percentage and variety of proper names used in the spoken vocabulary with age.

A later publication by Davis (1938) reviewed a more thorough analysis of the types of nouns used by children. Table 5 presents

TABLE 4

MEAN NUMBER OF PROPER NAMES IN CHILDREN'S SPEECH

Age in Years	Number of Subjects	Total Number Proper Names	Mean Per Child	Percent of All Words Per Child	Total Number Different Proper Names	Mean Per Child	Percent of Mean Number Different Words
5 1/2	248	268	1.08	0.5	197	0.79	0.8
6 1/2	63	87	1.38	0.5	56	0.89	0.8
9 1/2	125	111	0.89	0.3	93	0.74	0.6

Davis, 1937, P. 270

TABLE 5

PERCENTAGE DISTRIBUTION OF DIFFERENT TYPES OF NAME WORDS USED BY CHILDREN, ACCORDING TO AGE AND SEX

Age	Sex	Percentage of Total Nouns					Percentage of Different Nouns				
		Human Beings	Proper Names	Animals	Objects	Abstract Terms	Human Beings	Proper Names	Animals	Objects	Abstract Terms
5 1/2	Boys	22.5	2.2	20.1	26.1	29.2	17.1	1.8	11.4	47.6	27.1
5 1/2	Girls	19.5	3.2	21.6	27.9	27.7	10.5	1.7	9.4	51.7	26.6
6 1/2	Boys	22.4	2.5	15.7	27.3	31.9	14.6	1.9	12.3	45.6	25.5
6 1/2	Girls	20.3	3.1	14.4	30.5	31.6	10.9	1.8	8.9	44.3	34.1
SWRL Mod 2 Kg		0.0	60.3	0.0	35.1	4.7	0.0	23.8	0.0	61.9	14.0

Davis, 1938, P. 312

Using the categories as suggested by Davis: Human Beings includes nouns such as "beggar," "bandit," "herdsman," "flagbearer," etc. Proper Names includes nouns which refer to specific persons and specific places. Animals includes the labeled names of various animals such as "bear," "rabbit," and "kitten." Objects includes all nouns with concrete object referents. Abstract Terms includes all collective and abstract nouns not members of the previous categories.

the percentage of each noun type of the total noun frequency and the percentage of different nouns in each category. Nouns in the Mod 2 Kg stories have been categorized in the Davis format and percentages juxtaposed to the oral language information.

Noting that the column entitled "Proper Names" potentially includes nouns which refer to specific persons and specific places, it is first relevant that the SWRL program uses proper names exclusively to designate characters in the stories. Sixty percent of all nouns in the stories are character names. This is in contrast to the relatively small percentage of proper nouns used by children in spoken language. Five and one-half year-old girls have the highest percentage of names in their spoken vocabulary and even then, it only accounts for 3.2% of the total nouns.

Oral language data on different proper names yields percentages of 1.4%-1.9% of the total different nouns used. The stories employ ten different proper names forming 23.8% of the total variety of words in the noun form class.

Nouns which refer to human beings and animals comprise a large percentage (about two-fifths at 5 1/2 years-old) of the total spoken noun vocabulary. The percentage of different nouns referring to human beings and animals in children's speech is also substantial (approximately one-fifth at 5 1/2 years-old). These types of nouns are entirely omitted from the stories, despite the fact that the main characters of the stories are animals.

Abstract terms, including abstract and collective nouns, account for a large percentage of both the total noun frequency and the variety

of nouns in children's speech. In contrast to this natural usage information, the stories have roughly half the number of different abstract terms in the vocabulary and use these words only one-sixth as often as children do in normal speech. Clearly, Mod 2 Kg stories do not draw upon the variety and number of abstract and collective nouns which oral research data indicates the children employ in their own language.

The frequency of object nouns in the stories is also divergent from children's speech. Five and one-half year-olds' spoken language employs object referents approximately three-tenths of the time and this category supplies approximately one-half of the noun variety. The stories, by comparison, refer to objects with a greater frequency and a considerably larger relative variety of words in the total vocabulary.

VERBS

Tables 1 and 3 indicated that the Mod 2 Kg stories use a greater percentage of verbs and a larger variety of verbs proportionately than children employ in normal speech. Differences between oral and story verb usage are examined in detail below.

Verbs were classified by Davis into the subcategories of "Regular Verbs," "Irregular Verbs," and "Verbs Used as Auxiliaries." Table 6 presents a comparison of these subcategories of verbs used in oral language (Davis, 1938) and the use in the written stories. Table 7 presents a comparison of the number of different words in each subcategory.

TABLE 6

PERCENTAGE REGULAR, IRREGULAR, AND AUXILIARY VERB USAGE
IN CHILDREN'S SPEECH AND MOD 2 KG TEXT

	Regular Verbs	Auxiliary Verbs	Other Irregulars*
5 1/2 boys	14.8	21.2	64.0
girls	15.3	22.0	62.7
6 1/2 boys	20.6	21.1	58.3
girls	14.2	22.9	62.9
SWRL Mod 2 Kg			
Percentage:	26.58	23.75	49.68
Frequency:	(281)	(251)	(525)

Davis, 1938, P. 313

*"Irregular Verbs" denotes verbs used as main verbs but not functioning as auxiliaries in the particular sentence.

TABLE 7

PERCENTAGE OF DIFFERENT REGULAR, IRREGULAR, AND AUXILIARY VERBS USED IN CHILDREN'S SPEECH AND MOD 2 KG TEXT

	Regular Verbs	Auxiliary Verbs	Other Irregulars
5 1/2 boys	52.3	14.9	32.4
girls	51.7	15.0	33.3
6 1/2 boys	46.6	20.2	33.2
girls	45.4	20.3	34.3
SWRL Mod 2 Kg			
Percentage:	40.00	9.18	50.92
Frequency:	(22)	(5)	(28)

Davis, 1938, P. 313

Both Tables 6 and 7 are necessary to give a clear picture of the verb form class usage. The data on percentage of each subclass use in light of the total number of different words in the subclass are particularly enlightening.

Statistics show that regular verbs are used the least often in the total spoken vocabulary, yet have the largest variety. They provide approximately 15% of the total verb usage at 5 1/2 years old and about half of the variety of verbs. In contrast to this, the Mod 2 FYCSP stories use regular verbs a quarter of the time, yet obtain only two-fifths of the total variety from the form class of regular verbs. There is therefore, a somewhat higher frequency of regular verbs in the stories and a more limited variety of words when compared with data on children's natural language.

Irregular verbs in the speech of 5 1/2 year-olds are very common and supply about two-thirds of the total verbs used. The variety of irregular verbs spoken is about one-third of the total. On the other hand, the stories use irregular verbs almost half the time and derive about half of the total variety from this category of verbs. It is apparent that there is a lower frequency of irregular verbs in the written text compared with speech data, but, at the same time, there is comparatively a larger number of different irregular verbs introduced.

Auxiliary verbs are used with almost the same percentage of frequency in oral and written materials, but the speech of children has more variety of auxiliaries than is utilized by the Mod 2 Kg stories. By 6 1/2 years-old, the children are observed to have about one-fifth

of the variety of total verbs in the auxiliary subclass while the SWRL text derives less than one-tenth of its variety from auxiliaries. It is profitable to take a closer look at the subclass of auxiliary verbs. Table 8 presents a comparison of specific auxiliary verbs used in the speech of children and the auxiliary verbs employed in the Mod 2 Kg storybooks.

From Table 8, it is self-evident that the use of auxiliary verbs in the Mod 2 Kg text diverges in various ways from the normal spoken usage of children. Several of the most salient differences are pointed out and discussed below.

Be, Have

As is seen, the verb be is used more than twice as frequently in the speech of children than in the Mod 2 Kg stories. It is valuable to note that more than one-fourth of the time, the children orally use be as an auxiliary verb while the stories never use be in this important function. Subsequently, whereas the largest percentage of auxiliary verbs used in oral language is the verb be (more than one-third at 5 1/2 years-old), this verb is zero percentage of the auxiliary verbs in the stories.[1]

Have is another verb which children understand and use as an auxiliary verb in their own speech. One-fifth of their usage of this

---

[1]Although the use of be as an auxiliary is under-represented in the SWRL program by speech standards of Anglo children, it is important to remember that there are be verb problems with the dialect of Black English speakers. Hatch (1970) has suggested that it is impossible to avoid problems with be unless its usage is avoided until later in the program.

TABLE 8

AUXILIARY VERBS IN CHILDREN'S SPEECH AND MOD 2 KG TEXT

	% Distribution of Most Common Words (Totals)			% of Total Use of Words as an Auxiliary			Word % of Total Auxiliary Verbs			Word % of All Irregular Verbs		
	5 1/2	6 1/2	SWRL Mod 2 Kg	5 1/2	6 1/2	SWRL Mod 2 Kg	5 1/2	6 1/2	SWRL Mod 2 Kg	5 1/2	6 1/2	SWRL Mod 2 Kg
be	7.5	8.1	3.7	28.0	29.5	00.0	37.0	33.8	00.0	33.7	36.8	24.2
do	1.6	1.7	0.4	65.3	62.3	85.7	18.8	17.7	5.4	7.3	7.6	0.4
have	1.3	1.9	0.7	21.1	19.4	00.0	4.9	6.1	00.0	6.0	8.6	4.6
can	0.8	0.7	0.4	85.3	86.1	100.0	13.0	10.4	5.6	3.8	3.2	0.0
go	1.8	1.5	3.9	37.3	38.0	00.0	11.6	10.1	00.0	8.0	7.0	25.3
got	1.1	1.1	---	2.6	3.1	---	0.6	0.6	---	5.2	5.1	---
will	0.7	1.0	6.0	100%	100%	100.0	11.8	17.1	81.3	3.0	4.5	00.0
shall	not common		---	100%	100%	---	1.3	1.6	---	0.3	0.4	---
must	not common		0.6	100%	100%	100.0	---	---	8.4	---	---	00.0

Davis, 1938, P. 313

verb is as an helping verb. The stories use have only as an irregular main verb and do not take advantage of this verb in its potential auxiliary function.

The verbs be and have function grammatically as auxiliaries to form the progressive tense and the perfect tense respectively. Since the auxiliary function is omitted, the progressive and the perfect tenses are also omitted from the stories. The stories make an extensive use of the unmarked present tense in lieu of these two more common tenses in spoken language. As Jenkins and Krashen (1972) point out, the picture of a frog jumping from one lily pad to another in the first story is marked by the caption "I go," whereas "I am going" or "I am jumping" would be the common forms in spoken discourse.

Go

The verb go is the most commonly used irregular main verb in the SWRL program. It is more than twice as frequent in the written text than in the speech total of 5 1/2 year old children. In addition to this, the Mod 2 Kg program never uses go as an auxiliary verb, yet orally, children use go more than one-third of the time as an auxiliary, (e.g., "I go running everyday," "I go swinging with my friends").

The high frequency of this word as an irregular main verb is probably related to the omission of the progressive and of the -ing ending plus the perfect tense as we discussed above. Since go is technically termed a "process verb" or verb of action, it is usually ungrammatical to use the unmarked form to denote present action (Jenkins & Krashen, 1971).

Do

As an auxiliary, do is the second most common auxiliary used by children at 5 1/2 and 6 1/2 years-old. It is also a common main irregular verb in their speech. In contrast to this, do in the stories is both infrequently used as an auxiliary and as a main irregular verb. It is therefore under-represented in both of its potential categories of use.

Got

The use of got as an auxiliary verb by children at 5 1/2 and 6 1/2 years-old is not extremely common. Got is, however, about 5% of the total irregular main verbs used. Although its total percentage of the spoken vocabulary is only 1.1%, got is noticably absent from the SWRL program, as in the so-called "got passive," which entails the use of got as an auxiliary (Hatch, 1969).

Will, Shall, and Must

All three of these verbs are very uncommon in the speech of young children with will having the highest frequency and comprising 0.7% of the total spoken vocabulary. When used, they are employed almost exclusively as auxiliary verbs. Shall is not included in the stories and warrants no further discussion. Will and must, however, deserve attention since both occur in the Mod 2 Kg text.

Will is the most commonly used auxiliary verb in the written text. It contributes four-fifths of the total auxiliary frequency, or more than six times the auxiliary incidence of will in children's speech.

Clearly, the future tense--as formed by will--is used in the stories with a frequency far exceeding normal spoken usage. Further, this frequent use of the future tense in the stories seems to be a result of omitting the more common spoken progressive and perfect tenses (be and have).

No statistics are provided by Davis (1938) on the usage of must, since the incidence is insignificant in the total vocabulary of 5 1/2 and 6 1/2 year-old children. In contrast to the spoken usage of must, this verb is the second most commonly used auxiliary verb in the stories.

To summarize the primary findings of investigating the auxiliary verb usage in Anglo children's speech and the written SWRL text, the results may be schematicized into items used less often in the Mod 2 Kg stories than in speech, items used more often in the stories than in speech, and tenses employed in the stories and in children's speech.

1. Items used less often in the stories than in children's speech:

Auxiliary	Irregular Main
forms of be	forms of do
forms of do	forms of got
forms of have	
forms of can	
forms of go	

2. Items used more often in the stories than in children's speech:

Auxiliary	Irregular Main
forms of will	forms of go
forms of must	

3. And finally, the unmarked present tense and the future tense in the stories seem to be used in lieu of the more common spoken progressive and perfect tenses.

PREPOSITIONS

The first table of this paper shows a similar total percentage of prepositions in children's language and the Mod 2 Kg stories. A closer look at specific prepositions with the purpose of better understanding the individual usages in oral and written materials is of interest to the purpose here.

Table 9 presents a comparison of the most common prepositions children use in their speech and the prepositions used in the Mod 2 FYCSP stories. Five prepositions, ranging from 0.8%-1.9% of the total spoken vocabulary are cited here with to being the most commonly employed preposition in children's language. Ten preposition or functional preposition combinations are included in the stories with frequencies from 0.03%-2.9% of the total vocabulary.

Contrasting the oral and the written data, it is noteworthy that the preposition with is most common in the stories, but does not occur as one of children's most commonly used prepositions. Further, the prepositions in and on are the second and third most frequently used in the stories, but language data indicates that they are less common in children's speech.

While the preposition to is used with a comparable percentage of frequency in both speech and written text, the prepositions of and up are spoken far more often by children than is reflected in the written stories. Even when the preposition combinations are taken into account, there is still a discrepancy between oral and written usage of these two words.

TABLE 9

PREPOSITIONS IN CHILDREN'S SPEECH AND MOD 2 KG TEXT

	Percentage of Total Vocabulary*		
Word	Davis 5 1/2	Davis 6 1/2	SWRL Mod 2 Kg
with	not common	not common	2.9%
in	0.8%	1.1%	2.6%
on	0.8	0.6	1.7
to	1.9	2.0	1.7
up	1.2	1.1	0.5
from	not common	not common	0.2
out of	not common	not common	0.1
of	1.1	1.2	0.1
in back of	not common	not common	0.1
down from	not common	not common	0.03

Davis, 1938, P. 314

*The Davis data available provided statistics only on those prepositions qualifying as common in children's spoken language. For other prepositions and preposition combinations, regretably, there is no information for presentation.

In summary, the Mod 2 Kg stories frequently employ an uncommon preposition with while the prepositions up and of are used infrequently in comparison with children's speech.

PERSONAL PRONOUNS

Pronouns comprise about one-fifth of the total spoken vocabulary and nearly as large a proportion of the Mod 2 Kg stories. A closer examination of the personal pronoun category gives a better understanding of the relationship between spoken and written use. Table 10 presents data from the Davis (1938) research concerning the incidence of first person and third person pronouns in children's language at three ages. In addition, Table 10 presents the data compiled on these same personal pronouns in the Mod 2 Kg program.

TABLE 10

PERSONAL PRONOUNS IN CHILDREN'S SPEECH AND MOD 2 KG TEXT

	Percentage Distribution of First and Third Person Pronouns in Total Vocabulary			
Personal Pronoun	Davis 5 1/2	Davis 6 1/2	Davis 9 1/2	SWRL Mod 2 Kg
First Person (I, me, we, us)	3.4%	4.1%	2.2%	10.9%
Third Person (he, him, them, she)	6.5%	7.0%	9.2%	3.9%

The usage of personal pronouns in children's speech follows two interesting and interrelated trends with age. First, as the child grows older, he uses fewer first person pronouns; but more third person pronouns. It is notable, moreover, the first person pronoun percentage does not exceed the third person pronoun percentage at any age in the range investigated by Davis. In contrast to the oral language information, the usage of personal pronouns in the Mod 2 Kg stories favors first over third person. In relative terms, the FYCSP uses first person pronouns much more often than is characteristic in children's speech.

CONJUNCTIONS

Earlier in the paper it was mentioned that conjunctions as well as some other Mod 2 Kg text form classes show no significant deviations from total vocabulary speech norms. While this is true, conjunctions pose a special problem since they contribute very small numbers to the total vocabulary.

According to McCarthy and Davis (Table 1) the frequency of subordinating and coordinating conjunctions in children's speech does not give evidence of a linear trend with age but does consistently fall within 2.4%-3.8% of the total vocabulary. The Mod 2 Kg program uses conjunctions more often than speech norms indicate (19.12 per 1,000 running words of text) and only utilizes one coordinating conjunction, and, in the program. For comparison, Table 11 presents total numerical frequency of various coordinating conjunctions as used by 5 1/2 and 6 1/2 year olds.

TABLE 11

CONJUNCTIONS IN CHILDREN'S SPEECH AND MOD 2 KG TEXT

Number of Principal Coordinating Conjunctions Used Per 1,000 Running Words of Text				
Conjunction	Davis 5 1/2	Davis 6 1/2	Davis 9 1/2	SWRL Mod 2 Kg
and	1.53	1.67	3.65	19.12
but	0.19	0.21	0.20	0
or, nor, either	0.06	0.06	0.21	0
neither	0.04	0.04	0.02	0
than	0	0	0.05	0
Total Number of Words:	570,400	198,450	393,000	3,436

Davis, 1937, Pp. 144, 145, 146

This table cites only the usage of coordinating conjunctions and does not include the number of subordinating conjunctions per 1,000 in the count of each source.

Numerical frequency data verifies that children primarily use the coordinating conjunction and, although they also use but, and rarely or, nor, either, and neither. The sole use of and in the stories thus corresponds to its primacy in speech.

MINOR CLASSES

In addition to the preceding form classes which have been presented and discussed, we have placed several less commonly used form classes under the rubric of Minor Classes. This includes Existential Dummy (or Expletive), Qualifier, Sentence Linker, Includer, Interrogator, and finally miscellaneous items difficult to classify. The presentation of these classes will be descriptive more than comparative due to a paucity of information and normative data on children's usage of these types of words.

EXISTENTIAL DUMMY

As can be noted in Appendix A, there are seventeen occurences in the stories of it (6) and there (11) as existential dummies. Primarily, these two words are used as members of other form classes as shown in Table 12.

TABLE 12

EXISTENTIAL DUMMY USAGE IN THE MOD 2 KG TEXT

Word	Form Class	Frequency
it	noun	46
	existential dummy	6
there	adverb	74
	existential dummy	11

Although we have no data on children's use of it and there as existential dummies, West's (1967) *A General Service List of English Words* provides some interesting statistics. He states that it is used in adult texts as an existential dummy 27% of the time. There, on the other hand, is used in this manner 70% of the time. The use of these items by children is a point to be clarified in further research.

QUALIFIERS

Qualifiers, as defined by Jenkins (1972) include words such as very, so, no, less, etc. potentially occurring in exemplary contexts of "They are very good," "She was so happy," and "He was less willing."

The Mod 2 Kg stories contain only one word which serves as a qualifier. Still is used as a qualifier a total of seven times. It is first seen in Story 14, "Are Ann and Pat still in the tent?" It is again used as a qualifier in stories 18, 19, and 25. In addition to this, still is first introduced as an adverb with the quite different meaning of "silent" or "quiescent." It is later used as a predicate adjective with the same meaning as its adverb use. There is some question as to whether it should be regarded as an adjective in these cases. The total frequency count of still in the program is 18 with the incidence in different form classes depicted in Table 13.

SENTENCE LINKER, INCLUDER, AND INTERROGATOR

The Mod 2 Kg stories do not contain any words belonging to the classes Sentence Linker, Includer, or Interrogator. Words classified as interrogators are first introduced in the Mod 2 First Grade Reading Program.

TABLE 13

USAGE OF THE WORD STILL IN MOD 2 KG STORIES

Story Number																									
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
Adverbs																										
3	2	1		1			1																			
Qualifiers																										
			1				3	2						1												
Adjectives																										
																								1	1	1

Little information is available on the use of sentence linkers, includers, and interrogators in children speech. However, data from Rinsland (1945) as shown in Table 14, indicates that the interrogators are all within the first 600 most frequently used words. The omission of these words limits the Mod 2 Kg stories to yes-no questions, since all wh-word questions are unavailable. Whether such a limitation could have any important effect is unknown at present.

TABLE 14

INTERROGATOR USAGE IN CHILDREN'S SPEECH

Word	Frequency	
what	1952	1a1--one of the first 100 most frequent words
when	1000	1a1--one of the first 100 most frequent words
why	247	1a3--one of the third 100 most frequent words
where	577	1a2--one of the second 100 most frequent words
which	61	1b2--one of the sixth 100 most frequent words
who	256	1a3--one of the third 100 most frequent words

First Grade Running Words Total -- 353,874 Different Words -- 5,099

MISCELLANEOUS ITEMS

The final category in the analysis of the Mod 2 Kg stories contains three major types of words and phrases difficult to analyze in form classes. These items require further linguistic study to develop an adequate basis for classification of the words involved. To exemplify each of these:

1. the use of all

   e.g., "All of them are with me." (Story 28)
   "We will all jump." (Story 36)

2. the use of to + verb

   e.g., "I will ask Pat to go with me." (Story 29)
   "Ask Pat to swim with us." (Story 30)

3. the use of auxiliary + verb + to + verb

   e.g., "It will be fun to play there." (Story 27)
   "It is fun to be on the pond." (Story 27)

The classification of all into a specific surface linguistic form class is difficult in many contexts. Although usually classed as a determiner all o ten seems to add an intensifying function, thus serving as a qualifier. In some cases it seems to combine the determiner and qualifier functions. Opinions frequently vary as to which functions are operative in a given sentence. Rather than forcing a questionable classification, the item has been set aside from the main body of the analysis pending linguistic clarification.

Despite its uncertain linguistic status, all has a high frequency in first-graders spoken and written language according to Rinsland (1945). All qualifies as one of the first 100 most commonly used words. Future research on language development should be directed toward examination of the functions of all to discover what meanings this word has in children's speech.

Both of the remaining problems of classification involve infinitival nominalization. The classification of to is uncertain in these cases. It is clear that to does not have ordinary prepositional function in such cases, but signals the onset of the nominal. The word to perhaps

simply should be called a verb nominalization marker, but since such a classification is not standard, it has been set aside under the miscellaneous category. It may be that linguistic study of the transformational origins of to in an underlying sentence would provide a clear-cut categorization.

GENERAL OBSERVATIONS

Examples of words used in two or more form classes in the Mod 2 Kg stories are shown in Table 15. Generally in the stories a word is used in one form class without shifting throughout the thirty-seven stories. Realizing that about 72% of the 1,000 most common words may occur in more than one part of speech, this consistency should facilitate comprehension.

Recent research by Carroll (1971) on comprehension of words with multiple grammatical functions is relevant. He found that knowledge of the meaning of a word is not sufficient to ensure comprehension when the word is used in its less common functions. Word meaning must be coupled with knowledge of possible grammatical functions of the word and the limits of these functions. In production or comprehension of messages, such knowledge is necessary for competence in English. School children were found to have significantly more difficulty with words used in their less frequent grammatical functions in the third and sixth grades, and this effect even remained for many words for ninth-graders. With increasing age and grade, children display less difficulty in comprehending secondary grammatical usages.

TABLE 15

WORDS USED IN MORE THAN ONE FORM CLASS IN THE MOD 2 KG TEXT

Word	Form Class	Frequency
it	noun	46
	existential dummy	6
there	adverb	74
	existential dummy	7
still	adverb	8
	adjective	3
	qualifier	7
land	verb	19
	noun	3
help	noun	61
	verb	5
this	noun determiner	20
	noun	10
up	adverb	19
	preposition	16
	adjective	3
on	preposition	57
	adverb	3
trick	noun	3
	verb	2
back	noun	1
	adverb	7

CONCLUSIONS AND SUGGESTIONS FOR FUTURE INVESTIGATION

Some discrepancies between the speech of young Anglo children and the Mod 2 Kg stories have been examined. It is unknown whether such differences are advantageous, deleterious, or irrelevant to ease of comprehension and learning for the beginning reader. The value of the investigation undertaken here is the indication of areas for potential study with implications for Mod 3 development. Of general research interest is the relation between a child's speech production and his ability to comprehend both spoken and written language. The nature of the relationship between production and comprehension remains to be defined in useful theoretical terms, and investigated empirically in an experimental program.

On a more particular level, several frequency differences have been pointed out between what children say and what they are asked to recognize and comprehend while decoding the stories. Many of the differences between production and written material are small, and some necessitated either by limitations intrinsic to the written medium, or the requirements of orderly decoding instruction (Cronnell et al., 1971). When items are omitted entirely from the Mod 2 Kg stories, the need for information on comprehension difficulties reasonably seems less urgent than otherwise. On this basis the form classes of sentence linkers, simple includers, most conjunctions (except and) and perhaps also the interrogators could be postponed from immediate research consideration.

For several items which occur in the stories, questions have been raised about potential problems in comprehension even though no normative data is available for comparison of oral and written usage. Usage of qualifiers, marked infinitives, and existential dummies belong to this category. The Mod 2 Kg stories have one qualifier (still). A few more familiar examples of qualifiers might be less, very, no, etc. Research has yet to show whether children can understand the implicit contextual comparative function of many qualifiers. It is likely that some qualifiers and contexts will be found more difficult than others. For example, "He was very cheerful" involves a judgement as to the degree of cheerfulness which is much clearer than "He was rather cheerful." In the same way, some marked infinitives might be more troublesome for the children than others. For example, highly abstract marked infinitives may pose a greater conceptualization problem than more concrete infinitives. "He wants to know something," may be more difficult than "He wants to run somewhere." Both examples, however, present different problems for information-processing than the simple noun + verb + object ("Pat runs home"). In a to + verb structure, the child is required to understand both the marked infinitive verb usage and the detached relation to present time. Correct existential dummy usage is also an information processing task. It requires the abstraction of the word it or there from a specific referent and interpreting a more etherial syntactic structure. The qualifiers, marked infinitives, and existential dummies identify relevant problems for future research.

Some of the larger differences between the frequency distributions for children's production and the Mod 2 Kg stories involve more substantial class membership and seem more important for early research consideration. Among function words, personal pronoun usage and preposition usage are two such form classes. First person pronouns comprise nearly 11% of the total story vocabulary. Almost three of every forty words are either I or me. Since children use (and perhaps hear) a preponderance of third person pronouns, some unanticipated effect is likely to result from a reversal of this pattern. For example, children may be more prepared to find the topic of communication outside the speaker. By the same token, prepositions in the SWRL vocabulary show very different patterns of usage from children's produced speech. While the stories use with, in, and on most frequently, children are familiar with using to, up, and of in their own utterances. Again, there is a need to determine if these differences involve effects on ease of comprehension.

Among the major form classes, several of the differences between children's production and the story frequencies encourage early investigation. The form classes involved are verbs, nouns, and adjectives. The comparative usage of auxiliary verbs is particularly discrepant. Since be is by far the most common auxiliary (37% of all auxiliaries) in children's speech, and the modals (will and must) are relatively uncommon, it is pertinent to ask the effect on information processing ease when modals are used instead of be in a written text. Concurrent with the omission of the auxiliary usage of be and have,

there is also the omission of the progressive tense and perfect tense. It is not known what effects on comprehension can be expected when the child is presented with the unfamiliar unmarked present tense and the future tense in first stages of reading instruction.

In addition to the differences in auxiliary verbs, the noun form class also contains large deviations from speech norms. The Mod 2 Kg stories contain more than twelve times the proportion of proper names in children's speech. On the other hand, noun and verb modifiers form only a small part of the vocabulary in contrast to children's production. A more specific breakdown of the modifier form class shows that the total story vocabulary contains 7.3% adverbs, 7.0% articles, 1.1% demonstratives, and only 0.6% content adjectives. The frequency of adverbs is quite comparable to that in children's speech (see Table 1), however, content adjectives seem to be far less frequent than would be expected. While no data is available on the relative frequency of determiners (articles and demonstratives) and content adjectives in speech, it is certain that content adjectives represent a substantial proportion of children's modifier usage. There are nearly 900 content adjectives listed by Berdiansky et al, (1969) which had substantial frequencies in various word counts of speech in young children. Only two of these (wet and glad) found their way into the Mod 2 Kg stories excluding peculiar uses of still, up, and out as adjectives. Clearly much of the specificity of detail and conceptual variety produced by the content adjectives has been omitted from the stories. The consequences of that omission, if any, remain to be discovered.

Carroll's (1971) research on the comprehension of words in different syntactic roles indicates that this is one of the most important problems which should be addressed in research on comprehension. Since the early portion of the reading program is primarily concerned with the acquisition of decoding skills, it is quite reasonable that most words should be first introduced and used with only one function to reduce the source of difficulty for the child beginning reading. However, empirical studies should be carried out to determine if this procedure is facilitating, or whether serious subsequent problems are created. In either case, further research is needed to determine when and how the secondary functions should be introduced, and how to manage words for which multiple functioning is unavoidable. In acquiring comprehension of the secondary functions, there are potential sources of both positive and negative transfer from the primary usage of a word, and methods need to be found which will reduce the effect of the negative sources, and strengthen the effects of the positive sources.

APPENDIX A

Word Frequency Usage in the Mod 2 Kindergarten Storybooks by Form Class

Content-Nouns

Word	Story Number																																			Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	
log					7	6		3		1		1	2		1		3				2				1		2	1										30
Ann							7	4		5	5			5			5	3	3	2	2					6	4			1						3	1	56
Nat								5	2		6					2				3				9		2					3			3	9		37
Tip									8		2	6		4					3			6				3			4		8				9	8	61
Pat									5	3		5	9	5			1	4	2		10		6	5		2		2	4	5	2				1		71
pit									4	3			2		1						2											1		2			15
Snap										4			10		5			3		3	5	6		7		1		2			1				4	1	52
Lil											7	7			4	2	7	2		3					6		1	2	4			5				1	51
logs												3																			3						6
tent														6	2							2							2		4	1					17
den														4										2			3	6									16
Tut															5	5	6	6			2	8								1			7				40
band																5						1	3														9
Bud																7									5	4					3				2		21
tub																4		8						5								7					24
mud																	5	4	2																		11
tubs																		2																			2

Content-Nouns (con't)

| Word | Story Number | | |

Content-Nouns (con't)

Word	Story Number																																	Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	
rock																																	3	3	3			9
rocks																																		11				11
grass																																		4	4			8
job																																			4			4
back																																				1		1
box																																					8	8
trick																																					3	3
																																						775

Pronouns

Word	Story Number																																		Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	
I	12	11	10	6	5	2	5	4	1	2	3	1	2	3	2	6	5	1	5	5	5	1	1	1	9	5	2	5	7	5	3	3	10	6	12	7	9	182
me			5	2	1	3			1	1	1		1	4	1	1	2	1	4	3	3	2	3	2	4	4	2	2	1	1	2	1	2	2	5	2	2	71
you				9	6	2	2	6	5	5	4	2	6	3	1		5	7	1	2	2	1	1		4	5			2	3	6	4	2	1	6	6	7	116
we						6	1	1	2	1	2		2	3	2		1	4	4	4		2	3	2	2	1		3	1	3	6	9		1	4	1		71
it							7	1			1				6							1	2		2	6		4	2	2	1	6		2			3	46
us															4	1	1	1	2	3							2	1	3	2	3	1	1	1				26
he																		1								3	2	1	5	3	3		4		1	1	3	27
him																				4	3	6	1	2	5		2	1	4	1	3		2					34
them																								5		1	2	6	1			1	1	3				20
she																										3		1	1				1					6
																																					599

Content-Verbs

Word	Story Number																																	Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	
go	12	8	5	5	2	8	1	5	2	3	1	3	3	5	6	2	7	5	6	4	2	3	2	4	2		2	1	1	2	3	5			1	2		123
play		8	8	4	7	5	11	4	3		1	1	1	3	1	8					2		2			3									2		2	76
are				5	3	3		3	4	4	1		2	4			1	1	2		1			5		2		3	1	1	1	1	1	4		2	1	56
is									1						1	1		9	2		1	3	3		2	4		3	3	3	3	1	2	1	2		4	48
sit										6	8		4	2	4		4	1	1	2	1	2		2	1						3	1	1				1	44
slip											4	1	3	1	1					2																	12
sits												7				1					1	3	2															14
plays												3				2						1	2															8
slips												2			1		1			1	1										1							7
land													4		5				2		4											4						19
let															2	1	3	1	4			4	2		2	1	1	1			1	1		1	2	2	3	36
lands														1		1	1		1		1																	5
am																	4									2		1	3	1					1	1	1	14
put																		5	2	1				2			3	2	1				2	3				21
puts																		1		1	1																	3
run																			3	1	1		2	3		3	1	2	1			1						18
runs																			2	1		1		1		1		4	1		4		1					16
help																				9	4	1	5	4	5		3	3		1	4		3		7		2	58
helps																					1				1								1					3

Content-Verbs (con't)

Word	Story Number																																										Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37										
stop																					5	1	2	4	2		2	3											2								19
smash																							4		1	2					1																8
stops																								1																								1
see																									5	2	2	2	2		1	5	2	3												24
need																									6	1				1	2				1			2								13
needs																									1										1												2
be																										5			1			1	2			2	2								13
has																1						5	1	1	1	2	3		2	3			2	3				1								24
sees																											1	1	1		2			1												6
fell																											5	2					1													8
puts on																													2		1			1												4
put on																													1	2																3
ask																													4	1			1													6
keep																													4	2	1	1		1	1		1									10
keeps																													1	1							1									3
went																														4	1	1		3		1											10
swim																														5			1													6
camp																															2																2
put up																															3																3
cut																															3		1		4		4									12

Content-Verbs (con't)

Word	Story Numbers																																					Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	
want																																5	2	2	3	3		15
wants																																	1					1
trick																																	2					2
dig																																		3				3
jump																																			3	11		14
dig up																																			2			2
did																																			2			2
yell																																				3		3
yells																																				2	2	4
fix																																					3	3
go out																																					3	3
																																						810

Auxiliary Verbs

| Word | Story Numbers | | |

Content-Adjectives

Word	Story Number																																	Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	
out																										5												5
up																										3												3
wet																														2	1							3
glad																								4											1	1		6
still																																			1	1	1	3
																																						20

Noun Determiners

the				7	6	3	3	4	4		4	4	10	4	9	8	4	8	12	9	2	12	8	7		5	7	2	4	9	8	11	15	9	1	4	204
a																	6	5				1		3		1	3	2	3		6	1				4	35
his																					7	1	1	1		1	3	1					3	1		1	20
this																							4	1				3				1	2	3		2	16
that																												1									1
																																					276

Content-Adverbs

| Word | Story Numbers | | |

Prepositions

Word	Story Number																																		Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	
with			5	5	3	3	1	2	3	3	3	4	2	4	3	2	5		3	2	1	5	5	6	1	8	1	1	1	3	1	3	3	2	4		3	101
on					5	1					3	2	3	1	3	1	2	4	6	4	3	2	4	1				3	1			2	2	4				57
to						5				3				2			2		1	2	1		1	1			3	3	1	3	4	1	1			1		35
in								6	3	4			2	9	4	5	5	10	8		6		1	3	2		4	4	1	2	1	2	1	4			3	90
up															1	1				6		3	2	3														16
from																												5	1		1	1						8
out of																												2	1						1			4
of																												3						1				4
in back of																																	3					3
down from																																			1			1
																																					319

Coordinators

Word	Story Number																																	Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	
and													5	5	4	3	4	1	1	1	4	4	1	7	1	3	2	1	1		2	4	4	3		2	2	65

Includers

No form class members.

Sentence Linkers

No form class members.

Interrogators

No form class members.

Existential Dummy

Word	Story Number																																	Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	
there		3	1									1						4														1		1				11
it																											2			2		1				1		6
																																						17

Qualifiers

still														1				3	2						1														7
																																							7

Miscellaneous

all																											5							2	2	1		10
to + verb																										2		1	3			5	5	2		4	1	23
just																																			1				1
																																						34

APPENDIX B

Words in the Mod 2 Kindergarten Storybooks as Rated by Rinsland's *A Basic Vocabulary of Elementary School Children*

The word frequencies were compiled from children's writings obtained from a cross-section population in the United States. Because of the limited writing ability and experience of the first-grade children, it was necessary to secure written reports of their conversation in school and outside. For this reason, there is some justification in raising the question of consistency of source material in Grade 1. Table 1 cites the various types of materials employed for each grade. Table 2 gives an explanation of the code used by Rinsland to denote word frequencies relative to total vocabulary.

TABLE 1

Number and Kinds of Writings for Each Grade

Grade	Personal Letters	Exposi-tions	Original Stories	Poems	Examination Papers	Conversa-tion Pages	Proj-ects	Others	Total
1	383	1,321	327	50	110	4,630	512	371	7,594
2	1,463	1,978	486	102	39		493	6,570	11,202
8	868	3,599	1,021	160	2,206		843	1,706	10,363

Rinsland, 1945, P. 9

TABLE 2

Group Symbols and Their Meanings

Approximate Group	Group Symbol	Meaning (Reading from Right to Left)
First 100	1a1 (and continue up to 1a5)	The first one hundred of the first five hundred of the first one thousand (and up to the first five hundred)
SEcond 500	1b1 (and continue up to 1b5)	The first one hundred of the second five hundred of the first one thousand, meaning the sixth hundred (and up to the first one thousand)
First half of the second thousand	2a (and continue up to 5b)	The first half of the second thousand (and up to all of the fifth thousand)
Sixth thousand	6 (and continue up to 9)	The sixth thousand (and up to the first nine thousand)

Rinsland, 1945, P. 14

Word	Grade 1	Grade 2	Grade 8
pit	4a	3a	6
logs	2b	2a	2b
tent	2a	2a	2b
den	3b	2a	9
band	1b1	1b3	1b3
tub	2a	2a	6
mud	1b5	2a	2a
tubs	--	1 freq	8
trip	1b3	1b1	1a4

Word	Grade 1	Grade 2	Grade 8
drum	1b1	1a5	4a
hill	1a5	1a3	1a4
drums	2a	2b	9
pond	2a	1b5	2a
land*	1b5	1a5	1a3
path	3b	3b	2a
ships	3a	2a	1b1
ship	1b3	1b2	1a3
help*	1a3	1a3	1a3
tree	1a1	1a1	1a2
this*	1a1	1a1	1a1
fun	1a3	1a2	1a3
mask	2b	4a	6
camp*	2b	3a	1a5
trees	1a3	1a4	1a3
rock	1b4	1b3	1b1
rocks	2a	1b3	1b2
grass	1a4	1a4	1b4
job	2a	2b	1a4
back*	1a2	1a2	1a1
box	1a3	1a2	1a5
trick*	2b	2a	4b
I	1a1	1a1	1a1
me	1a1	1a1	1a1

Word	Grade 1	Grade 2	Grade 8
you	1a1	1a1	1a1
we	1a1	1a1	1a1
it	1a1	1a1	1a1
us	1a1	1a1	1a1
he	1a1	1a1	1a1
him	1a1	1a1	1a1
them	1a1	1a1	1a1
she	1a1	1a1	1a1
go	1a1	1a1	1a1
play	1a1	1a1	1a2
are	1a1	1a1	1a1
is	1a1	1a1	1a1
sit	1a4	1a5	1b3
slip	3a	4a	3b
sits	2a	1b5	3a
plays	1a3	1a2	2a
slips	--	3a	6
land*	1b5	1a5	1a3
let	1a2	1a4	1a3
lands	1 freq	3a	2b
am	1a1	1a1	1a1
put	1a1	1a1	1a2
puts	2a	1b3	1a2
run	1a1	1a1	1a3

Word	Grade 1	Grade 2	Grade 8
runs	1a5	1a3	2a
help*	1a3	1a3	1a3
helps	2a	1b1	1b5
stop	1b1	1b1	1b1
smash	--	--	8
stops	4a	3a	3a
see	1a1	1a1	1a1
need	1a5	2a	1b3
needs	2b	3a	3b
be	1a1	1a1	1a1
has	1a1	1a1	1a2
sees	2a	2a	2b
fell	1a4	1a4	1a3
ask	1b1	1b1	1a5
keep	1a3	1a4	1a3
keeps	2a	1b5	2b
went	1a1	1a1	1a1
swim	1b1	1a4	1b3
camp*	2b	3a	1a5
cut	1a3	1a5	1a5
want	1a1	1a1	1a2
wants	1a4	1a4	2a
trick*	2b	2a	4b
dig	2a	1b3	3b
jump	1a4	1a3	2a

Word	Grade 1	Grade 2	Grade 8
did*	1a1	1a1	1a1
yell	3a	2a	3b
yells	1 freq	1 freq	9
fix	1b1	2a	2b
will	1a1	1a1	1a1
did*	1a1	1a1	1a1
must	1a5	1a5	1a3
can	1a1	1a1	1a2
cannot	2a	1b4	1b3
out*	1a1	1a1	1a1
up*	1a1	1a1	1a1
wet	2a	1b4	2a
glad	1a3	1a3	1a5
still*	1b1	1b1	1a3
the	1a1	1a1	1a1
a	1a1	1a1	1a1
his	1a1	1a1	1a1
this*	1a1	1a1	1a1
that	1a1	1a1	1a1
there*	1a1	1a1	1a1
still*	1b1	1b1	1a3

Word	Grade 1	Grade 2	Grade 8
up*	1a1	1a1	1a1
not	1a1	1a1	1a1
out*	1a1	1a1	1a1
in*	1a1	1a1	1a1
on*	1a1	1a1	1a1
now	1a1	1a2	1a1
down	1a1	1a2	1a1
back*	1a2	1a2	1a1
just	1a1	1a3	1a1
yet	1b1	1b4	1b1
yes	1a2	1a3	1a4
next	1a3	1a4	1a2
with	1a1	1a1	1a1
on*	1a1	1a1	1a1
to	1a1	1a1	1a1
in*	1a1	1a1	1a1
up*	1a1	1a1	1a1
from	1a2	1a1	1a1
of	1a1	1a1	1a1
and	1a1	1a1	1a1
there*	1a1	1a1	1a1
it*	1a1	1a1	1a1

Word	Grade 1	Grade 2	Grade 8
still*	1b1	1b1	1a3

*The words marked by an asterisk appear in the SWRL text as members of more than one surface linguistic form class. As Rinsland's frequency count does not take into consideration the grammatical usages of a word, the figures cited for such multi-functional words include the gross total of all various usages. Note that although some words are used exclusively in one form class in the SWRL program, there are other potential usages probably reflected in the Rinsland gross total.

REFERENCES

Berdiansky, B., Stanton, G., & Cronnell, B. Design for sequencing spelling-to-sound correspondences in Mod 2 reading program. Technical Memorandum No. TM-2-71-03, 1971, Southwest Regional Laboratory, Los Alamitos, California.

Bessemer, D. W. Concepts and language in K-1 instruction. Technical Note No. TN-2-72-07, January 31, 1972, Southwest Regional Laboratory, Los Alamitos, California.

Carroll, J. B. Comprehension by 3rd, 6th, and 9th graders of words having multiple grammatical functions. Research Bulletin No. RB-71-19, April, 1971, Educational Testing Service, Princeton, New Jersey.

Davis, E. A. Developmental changes in the distribution of parts of speech. *Child Development*, 1938, 9, 309-317.

Davis, E. A. Development in the use of proper names. *Child Development*, 1937, 8, 270-272.

Dreiman, G. H. J. Differences between, within, and spoken language. *Acta Psychologica*, 1962, 20, 36-57.

Harrell, L. A comparison of the development of oral and written language in school-age children. *Society for Research in Child Development*, 1957, 3, 1-77.

Hatch, E. Sequencing language structures for Model 2 communication skills program. Technical Memorandum No. TN-2-70-10, July 24, 1970, Southwest Regional Laboratory, Los Alamitos, California.

Hatch E. The syntax of four reading programs compared with language development of children. Technical Report No. 21, December 22, 1969, Southwest Regional Laboratory, Los Alamitos, California.

Jenkins, C. Some surface linguistic classes with conceptual relevance. Technical Note No. TN-2-72-04, January 24, 1972, Southwest Regional Laboratory, Los Alamitos, California.

Jenkins, C., & Krashen, S. Syntax considerations in stories for beginning readers. Technical Note No. TN-2-72-15, Southwest Regional Laboratory, Los Alamitos, California.

Loban, W. D. The language of elementary school children. National Council of Teachers of English, Report No. 1, 1963, Champaign, Illinois.

McCarthy, D. The language development of the preschool child. Institute of Child Welfare Monograph Series No. 4, 1930, Minneapolis, University of Minnesots Press.

Rinsland, H. D. *A basic vocabulary of elementary school children.* New York: Macmillian Company, 1945.

Ruddell, R. B. The effect of the similarity of oral and written patterns of language structure on written comprehension. *Elementary English*, 1965, 42, 403-410.

Smith, E. B., Goodman, K. S., & Meredith, R. *Language and thinking in the elementary school.* New York: Holt, Rinehart, and Winston, 1970.

Sullivan, H. J., Stanton, G., Connolly, L., Wiesbauer, M., & Larson, J. Content and specifications for the 1970-71 first year reading books. Development Memorandum No. 13, 1969, Southwest Regional Laboratory, Los Alamitos, California.

Thorndike, E. L. *A teacher's word book of the twenty thousand words found most frequently and widely in general reading for children and young people.* New York: Bureau of Publications, Teachers College, Columbia University, 1932.

Venezky, R. Unpublished address presented at Southwest Regional Laboratory, Los Alamitos, California.

West, M. *A general service list of English words.* Great Britain: Longmans, Green and Co. Ltd., 1967.

DISTRIBUTION

1 - Archives

1 - Becher

2 - Bessemer

1 - Cronnell

5 - Directorate

2 - Fiege-Kollmann

1 - Follettie

1 - Koehler

4 - Kuchenbecker

1 - Legum

2 - Library

1 - McClain

1 - Midler

1 - Pfaff

1 - Rhode

1 - Rudegeair

1 - Rundle

1 - Schwab

1 - Scott

1 - Smith